

**REMARKS**

Favorable reconsideration of this application, in light of the above amendments and the following discussion, is respectfully requested. With this Amendment, claims 2 and 9-11 have been cancelled. Claims 1, 3-8, and 12 are now pending.

Claims 1 and 6 have been amended to recite  $\alpha$ -alumina particles having an aspect ratio of 55 to 2000. Support for this amendment is found in the specification at paragraph [0029]. Applicants submit that this amendment does not add any new matter. In addition, Applicants have incorporated the limitations of claims 2 and 11 into independent claims 1 and 6, respectively. Applicants submit that these amendments add no new matter. The entry of these amendments is respectfully requested.

**Rejections under 35 U.S.C. § 112, Second Paragraph**

The Examiner rejected claims 1-3 under 35 U.S.C. § 112, second paragraph, as being indefinite, stating that the phrase "produced using a source material that will introduce phosphate ions" is not part of the original disclosure. Applicants submit that at least paragraph [0035] of the specification supports this language, which states that "the source materials which introduce phosphoric acid ions include phosphonic acid or phosphinic acid or various phosphates." Accordingly, Applicants respectfully submit that the phrase is not new and is part of the original disclosure, and therefore request the withdrawal of this rejection.

The Examiner further rejected claims 1-3 under 35 U.S.C. § 112, second paragraph, as being indefinite, arguing that it is not clear what a "source material" is in claim 1. Applicants call the Examiner's attention to paragraph [0035] describing the

source material as a supply of phosphoric acid ions, the increased addition of which "is effective in providing a small thickness and a large aspect ratio to the resultant flake-like particles." As such, Applicants respectfully submit that the claims are definite and that this rejection should be withdrawn.

The Examiner also rejected claims 1-3 under 35 U.S.C. § 112, second paragraph, as being indefinite, stating that the phrase "the weight of said compound used in the calculation is the weight of  $P_2O_5$ " is vague and confusing. The rejected claim language is merely a means for converting the various phosphoric compounds that may appropriately be used into a common weight, indicating that the weight of  $P_2O_5$  is the weight of phosphoric compound used in determining its percentage relative to the alumina particles. The specification supports this claim language in at least paragraph [0041], defining the term "phosphoric compound," to which the phrase refers, and further stating "the amount of such phosphoric compound(s) is indicated in terms of oxide, i.e.,  $P_2O_5$ ." To clarify the claims, Applicants have herein amended claims 1 and 6 to indicate that the weight of the claimed phosphoric compound is converted to the weight of  $P_2O_5$  when calculating its percentage relative to the alumina particles. This amendment is neither narrowing nor adds new matter and is supported by the specification in at least paragraph [0041]. With this amendment, Applicants respectfully submit that this rejection has been overcome and request its withdrawal.

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### Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 1 and 6-10 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,587,010 to Shibasaki et al. The Examiner asserted that Shibasaki et al. teaches a process for producing alumina particles having a size of 1  $\mu\text{m}$  or less and a thickness of 0.1  $\mu\text{m}$  or less. Applicants respectfully traverse this rejection.

Under *In re Royka*, 490 F.2d 981 (CCPA 1971), to establish a *prima facie* case of obviousness, the Examiner must prove that all claim limitations of the claimed invention are taught or suggested by the prior art. See MPEP § 2143.03. Independent claims 1 and 6, as amended herein, recite flaky  $\alpha$ -alumina particles having an aspect ratio of 55 to 2000 and including a phosphoric compound in an amount of about 0.2% to about 5.0% by weight relative to the weight of the alumina particles. However, Shibasaki et al. neither teaches nor suggests the presence of a phosphoric compound in its claimed product. As a result, Shibasaki et al. does not support a *prima facie* case of obviousness as the reference does not teach or suggest this claim limitation.

In addition, Shibasaki et al. neither teaches nor suggests the claimed aspect ratio, instead disclosing alumina particles having a particle size of 1.0  $\mu\text{m}$  or less and a thickness of 0.1  $\mu\text{m}$  or less (see col. 3, ln. 21-23 and claim 1). Moreover, Examples 1 and 2 of Shibasaki et al. note that both particle size and thickness share the same proportional relationship to temperature and pressure changes during production. Example 3 of Shibasaki et al. further states that the produced alumina powder has a uniform particle diameter of a little less than about 1.0  $\mu\text{m}$  and a thickness of about 0.1  $\mu\text{m}$ , yielding an aspect ratio of about 10. Given the recited particle dimensions and the

stated proportional relationship between these dimensions during production, Applicants submit that the produced  $\alpha$ -alumina particles of Shibasaki et al. will always possess an aspect ratio of about 10, and certainly would not achieve an aspect ratio of 55 to 2000 as recited in amended claims 1 and 6 of the present application. Therefore, Shibasaki et al. does not support a *prima facie* case of obviousness because it neither teaches nor suggests the claimed aspect ratio. As a result, because the reference does not teach or suggest either the claimed aspect ratio or the claimed presence of a phosphoric compound as recited in claims 1 and 6, Applicants respectfully request that this rejection be withdrawn.

The Examiner further rejected claims 2-3 under 35 U.S.C. § 103(a) as being obvious over Shibasaki et al. in view of U.S. Patent No. 6,197,277 to Fukuda et al. Noting that Shibasaki et al. lacks disclosure of  $P_2O_5$  and zeta-potential, the Examiner cites Fukuda et al. for these claimed attributes. Applicants have previously discussed that Shibasaki et al. does not teach or suggest flaky  $\alpha$ -alumina particles with an aspect ratio of 55 to 2000 and a phosphoric compound. Fukuda et al. does not remedy this deficiency, as it discloses an aspect ratio of only 15 to not more than 50. See abstract and claim 1. Since the combination of Shibasaki et al. and Fukuda et al. does not teach or suggest the recited aspect ratio, Applicants submit that the claims of the present invention are not rendered obvious over these references and the withdrawal of this rejection is respectfully requested.

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## Conclusion

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1, 3, 6-8, and 12 in condition for allowance. Applicants submit that the proposed amendments of claims 1 and 6 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the final Office Action by the Examiner presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that the entering of the Amendment would allow the Applicants to reply to the final rejections and place the application in condition for allowance.

Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner further dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and continued examination of the application, and the timely allowance of the pending claims.

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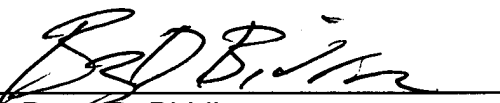
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Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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